

## Abstract of Disclosure

[0045] A system and method for generating and transmitting false packets along with a true packet to thereby hide or obscure the actual message traffic. A new extension header having a plurality of fields is positioned in the hierarchy of Internet protocol headers that control passage of the false packets and the true packet through the network. A sending host computer generates a plurality of false packets for each true packet and transmits the false packets and the true packet containing the Internet protocol headers and the extension header over the network. The new extension header is decrypted and re-encrypted by each host that handles a message packet that uses the new extension header to control the random re-encryption of the true packet body at random hosts and the random generation of false packets at each host visited by a true packet, at the recipient of the true packet, and at any hosts that receive a false packet.